REMARKS

Claims 1-15 and 17-97 are pending in this application. Independent claims 1, 18, 19, 31, 37, 43, 44, 50, 66, 67, 79, 85, 91 and 92 are currently amended, along with dependent claims 8, 14, 15, 23, 29, 30, 34-36, 40-42, 45, 57, 63, 64, 71, 73, 77, 78, 82-84, 88-90 and 93. Claim 73 has been amended to correct a typographical error uncovered by the Examiner and forming a basis for objection thereof.

Reexamination and reconsideration of the above-identified application, pursuant to and consistent with 37 C.F.R. § 1.112, and in light of the remarks that follow, are respectfully requested. Because the present claims are believed to be in condition for allowance, good cause exists for the entry of this amendment in accordance with 37 C.F.R. § 1.116.

In the Office Action, claims 1-15 and 17-97 were finally rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,067,005 to DeVolpi ("DeVolpi") in view of U.S. Patent No. 6,203,432 to Roberts et al. ("Roberts").

With the present amendment, all of the claims now clarify that the level segmenting unit or step for segmenting an output level of the analog calibration signal into predetermined calibration levels is based on a *predetermined* initial calibrating pressure. While the use of the word "initial" in the claims previously presented was believed to be sufficient to specify this concept, applicants have added the word "predetermined" for clarity and have not intended to alter the scope of the claims. For example, amended claim 1 (current amendments shown) provides:

> 1. (currently amended) A control apparatus, comprising:
> a controller;
> a detecting device for providing analog signals in response to pressures applied to the controller during normal operation of the controller and an analog calibration signal in response to ~~an~~ a predetermined

> initial calibrating pressure applied to the controller; and
>
> an output unit including a level segmenting unit for segmenting an output level of the analog calibration signal into predetermined calibration levels based on the predetermined initial calibrating pressure and for segmenting an output level of the analog signals into predetermined levels during normal operation, and an analog-to-digital (A/D) converting unit for converting the predetermined levels into digital signals each having a plurality of bits.

The current amendments thus better clarify the nature of the initial calibrating pressure, which is used for initial calibration. For example, when the control apparatus in accordance with the claimed invention is made on the production line, it is initially calibrated with a predetermined load or pressure applied to the control apparatus. When this occurs, the resistance of the pressure-sensitive detecting device becomes a maximum. The predetermined load allows analog signals to be output from the detecting device and based on the output level of the initial analog calibration signal, the output range of an analog signal that is to be level segmented by the level segmenting unit is adjusted. Support for this feature can be found in the specification, for example, in the discussion of Figure 6 (*e.g.*, pages 14-15).

Roberts discloses an input device for a computer game, the motion characteristics of which can be adjusted by selecting one of the several sensitivity options or by moving the device to a desired position that the player wishes to have as a predetermined position. The adjustment of the motion characteristics in Roberts is thus based on the user's wishers. By contrast, the level segmenting unit of the presently claimed invention segments an output level of an analog calibration signal into predetermined calibration levels based on a *predetermined* initial calibration pressure. This initial

calibration prevents the output level of the analog signals from being affected by individual differences of the pressure sensitive devices used and by the variation of the power supply voltages to be removed.

Unlike Roberts, the magnitude of the initial calibrating pressure with the present invention is predetermined. Further, the level segmenting unit of the present invention operates to segment an output level of analog signals into predetermined levels before the analog signals are converted by an A/D converting unit into digital signals so that the level of the input signal to the A/D converting unit can be kept constant.

Accordingly, applicants maintain that the present claims are not rendered obvious by the combination of DeVolpi and Roberts, especially since the proposed combination, even if made, would not produce the claimed invention of a level segmenting unit of step for segmenting an output level of the analog calibration signal into predetermined calibration levels based on the predetermined initial calibrating pressure.

Finally, applicants have amended a number of the claims to specify that the conductive member is formed with a shape having a cross-sectional area which decreases "in discrete steps" instead of describing same as "stepwise" to distinguish over the shape of conductive members (28) in DeVolpi, noted as "gradual" by the Examiner. Support for this amendment, which merely clarifies what was meant by "stepwise" and is not intended to alter the scope of these claims, can be found, for example, in Figures 37A - 37D and at page 37 of the specification.

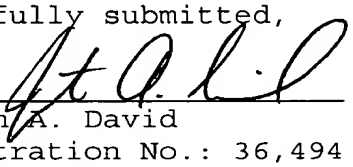
In view of the foregoing, applicants believe that each of the pending claims in this application is in condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejections of the claims and pass this application to issue.

If, however, for any reason the Examiner does not believe that such action can be taken at this time, he is respectfully requested to telephone applicants' attorney at (908) 654-5000 in order to overcome any additional objections which he might have.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

Dated: March 1, 2004

Respectfully submitted,

By 

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